

Research • Education • Innovation



# Product Enhancement Program Update

Bridget Wasser, Staff

NCBA





# FY 2009 AR Accomplishments

- Tactic 1A Pre-Harvest Beef Quality Research
  - 6 projects in FY 2009
- Tactic 1B Post-Harvest Beef Quality Research
  - 8 projects in FY 2009
- Tactic 1C Knowledge Dissemination
  - 6 projects in FY 2009; dissemination efforts accomplished and website maintained throughout the fiscal year



# FY 2010 AR Accomplishments

- Tactic 1A Beef Quality Improvement Research
  - RFP distributed in October 2009; 73 concept papers and 19 full proposals received
  - Reviews collected in January 2010 from 4 outside reviewers
  - 10 projects funded; received leveraging to extend dollars



# FY 2010 AR Accomplishments

- Tactic 1B Targeted Cut Solutions Research
  - BIG identified round aging information as most needed
  - One project funded; true need from BIG was round aging project (5 muscles, 2 grades, 4 aging times)



# FY 2010 AR Accomplishments

- Tactic 1C Beef Quality Benchmarking
  - Planned 2010 NBTS including feedback from online industry survey; researchers incorporated survey feedback and edited NBTS versus previous years
  - TAMU is leading research team with 7 collaborators; retailer and foodservice approvals received; sampling getting underway to last through next May



# FY 2010 AR Accomplishments

- Tactic 1D Spreading the Beef Quality Message
  - Website being maintained throughout the year
  - Animation project; working on additional options for information pieces to complete by next May
  - 2 to 3 page project summaries will be posted online for each 2009 project



# Outreach - Publications

Research • Education • Innovation

DESCRIPTIONS OF RESEARCH MATERIALS



**Beef Marbling Photographs with Pouch**  
Item #06901  
Price: \$26.25 each

Seven full-color photographs, 9" x 6" showing moderately abundant marbling (average Prime), slightly abundant marbling (low Prime), moderate marbling (upper 2/3 Choice), modest marbling (upper 2/3 Choice), small marbling (low Choice) and slight marbling (Select). Enclosed in a 6 1/2" x 10" black zippered pouch, with marbling texture chart.

**Pre-Harvest Cattle Management Practices for Enhancing Beef Tenderness**  
Item #12811  
Price: \$3.50 each

Industry innovation makes it possible to manage product attributes across the entire beef chain. Tenderness is a key determinant of eating satisfaction. This executive summary analyzes several different pre-harvest factors that can be managed to enhance tenderness characteristics.



**Beef Steak Color Guide**  
Item #06404  
Price: \$1.75 each

The *Beef Steak Color Guide* provides printed color comparisons and cooking temperatures for six degrees of doneness for beef steak—very rare, rare, medium rare, medium, well done and very well done.

**Pre-Harvest Factors Affecting Beef Tenderness in Heifers**  
Item #12812  
Price: \$3.50 each

Existing research suggests that beef produced by heifers is more likely to be tough compared to beef from steers. This executive summary explains the differences and provides tips for heifer management to minimize tenderness problems.



**The Guide to Identifying Meat Cuts**  
Item #06202  
Price: \$4.00 each

The *Guide* provides information, cooking recommendations and identifying photos for all cuts of beef, veal, pork and lamb. The 2009 updated edition of the *Guide* includes URMIS numbers for all cuts and identifies those cuts that meet government guidelines for lean.

**Post-Harvest Practices for Enhancing Beef Tenderness**  
Item #12813  
Price: \$3.50

Along with flavor, tenderness is the factor consumers rate essential to the beef-eating experience. In this executive summary, the authors analyze the science behind beef tenderness and describe each of the fifteen post-harvest practices proposed to enhance beef tenderness.



**Bovine Myology and Muscle Profiling Book**  
Item #12805  
Price: \$26.25 each

This program provides information about research that profiles the physical and chemical characteristics of beef muscles, thereby aiding processors in the development and preparation of new products based on the inherent properties of each muscle.

**Industry Guide for Beef Aging**  
Item #12810  
Price: \$3.50 each

This guide is a summary of a checkoff-funded study that determined optimal aging time to enhance tenderness for individual muscles of different USDA Quality Grades. Prior to this study, the industry aging specifications applied only to beef subprimal cuts, without Quality Grade consideration.



**The Chemistry of Beef Flavor**  
Item #12814  
Price: \$3.50 each

Of all sensory traits, flavor and tenderness are most important for affecting consumer acceptance of beef. This executive summary examines how a wide array of volatile compounds make up beef flavor.

**The History of Instrument Assessment of Beef**  
Item #12816  
Price: \$3.50 each

This Executive Summary reviews the thirty-year history of the evolution of instrumentation as a means for assessing beef yield traits in the United States. A graphic timeline of the history and a description of the various instrumentation approaches are included.



**Dry Aging of Beef**  
Item #12815  
Price: \$3.50 each

This executive summary describes dry aging and discusses the advantages and disadvantages of the process. Special attention is given to quality, palatability, and economic parameters important to those who market and purchase dry-aged beef.

These items are available for download on [www.beefresearch.org](http://www.beefresearch.org) or you may purchase hard copies by calling customer service at 1-800-368-3138.



## Beef Cutout Calculator

T.D. Carpenter, K.E. Bolk, D.R. Woerner, J.D. Takum and G.C. Smith

**T**he newly revised Beef Cutout Calculator is an interactive web-based tool that allows users to view yields for selected carcass components, as well as current USDA reported values for those cuts and a completed total carcass cutout value. Users may specify the type of carcass for which yields and values are to be reported, as well as the slaughter style to be used in deriving the carcass component cuts.

The previous version of the Beef Cutout Calculator used statistical prediction equations to estimate the expected weights for cuts generated by a given carcass that was fabricated using a given cutting style (e.g., which cut was generated from a given carcass), but values for each cut were determined using the published weights. Users could choose the cutout style they wanted to view for a hot carcass weight or the animal weight.


The newly revised and more advanced version of the Beef Cutout Calculator relies on the use of actual weights for computations – not weights determined to be likely by a large checkoff-funded research study to simulate each yield. The system was upgraded to the beefed Beef It into you complete cutout values for carcasses fabricated into a wider variety of cuts. Users now can also determine the type of animal (Steer, Heifer, Dairy), USDA yield grade (Select, Good, Choice, Prime), USDA quality grade (Select, Choice, Prime) and the weight category for beef carcasses to which values are to be assigned. Additionally, yields and prices for offal items and byproducts generated by the various classification for carcasses now are used to complete drop values that are then added back to carcass cutout values to estimate updated hot carcass values. Computations of drop values were not included in the previous version of the Beef Cutout Calculator.

From the homepage ([www.beefresearch.org/cutout.html](http://www.beefresearch.org/cutout.html)), the user can choose two different options for how carcass cutout values may be determined. The default option is "Carcass Calculator" as shown below (Figure 1).



Build Your Own Carcass Price

Figure 1. Default screen




## Beef from Market Cows

Dale R. Woerner, Ph.D., Colorado State University

**I**ntroduction

For over half a century producers, marketing cull cow transactions to 10 to 20% of their annual income and clearly contribute to the profitability of their operation. As all production sectors, cows are routinely culled from operations as a result of decreased productivity, efficiency and profitability. For years, cull cow producers have been searching for ways to increase the profitability of their cull cow and have incorporated management decisions such as feeding cull cow prior to selling and holding cows until necessary differences in the beef market have increased market cow prices (Figure 1). Regardless of what beef producers can do or not doing to improve the profitability of cull cow, the vast majority of cows entering processing facilities result from live auction markets, creating a tremendous amount of variation in the composition and quality of cows entering the beef market (Figure 2).



Weekly Cow Slaughter

Weekly Live Cow Dressed Value


Figure 1. Weekly market cow slaughter and live cow dressed value figures illustrating market tendencies and seasonal cow marketing (Source: USDA, AMS, Market News)



# Outreach - Website



[Featured Research](#)   [Fact Sheets](#)   [Resources](#)   [Related Links](#)   [Contact](#)   [Search](#)

 © Copyright 2006. Funded by The Beef Checkoff

Product  
Enhancement  
Research





# Outreach - Demos



Product  
Enhancement  
Research





# Technical Support for BIG

## Frequently Asked Questions: Innovative Beef Round Cuts



[www.beefinnovationsgroup.com](http://www.beefinnovationsgroup.com)

IMPS/NAMP numbers sourced from the 6<sup>th</sup> Edition of the North American Meat Processors Association's *Meat Buyers Guide* (©2010).  
Uniform Retail Meat Identity Standard (URMIS) numbers sourced from [www.meattrack.com](http://www.meattrack.com).



## BRAISON CUT & MERLOT CUT

Edgewood Round<sup>®</sup> (171) (IMP/NAMP)  
Beef Round, Retail Grade, Round  
\*The Natural Flavor Beef Brand  
\*Uniform Retail Meat Identity Standard

URMIS: 1840 Beef Round, Retail Grade  
NAMP: 1840 Beef Round, Retail Grade

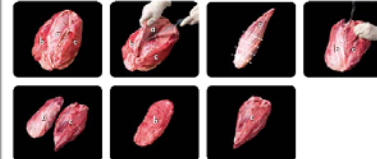
### CUTTING GUIDE

1 Start with the 171<sup>®</sup> (IMP/NAMP) Beef Round. Divide Round (1) into the Quartered Beef Round muscle (2) for the natural portion of the Quartered Beef Round muscle (3) and the Quartered Beef Round muscle (4). Any portion of the 171<sup>®</sup> Beef Round can be used for pot roast.

2 Remove the Superficial Digital Flavares (5) by following the natural seam between the muscle and the Quartered Beef Round muscle (6).

3 Remove all loose subcutaneous fat from the Superficial Digital Flavares (5) and merchandise as Retailer's Cut. Can be left whole or cut into 1/4" thick steaks for grilling.

4 Separate the remaining Quartered Beef Round muscle (3) and Quartered Beef Round muscle (4) portions for steaking. The Quartered Beef Round muscle (3) portion that has heavy connective tissue (7) and is present on both sides. Any remaining portion can be used for pot roast or ground round.



5 Present one of the muscle (3) and remove (5) portion of the Quartered Beef Round muscle (6) can be identified by the heavy connective tissue (7) and is present on both sides.

6 Remove the heavy connective tissue and all material (7) from the medial or ventral portion (8) can be identified by the heavy connective tissue (7) and is present on both sides.

7 The lateral portion of the Quartered Beef Round muscle (3) can be utilized for pot roast or ground round.

©2010 Cattlemen's Beef Board [www.beefinnovationsgroup.com](http://www.beefinnovationsgroup.com)

Brand	Item	Product Name	Weight	Grade	IMPS #	NAMP #	URMIS #
SCHARFF CARTRIDGE	Beef Round	Edgewood Round <sup>®</sup> (171)	17.0 lb	USDA Prime	171	1840	1840
	Beef Round	Edgewood Round <sup>®</sup> (171)	17.0 lb	USDA Choice	171	1840	1840

## 184D Top Sirloin Cap

184D TOP SIRLOIN CAP  
BICEPS FEMORIS MUSCLE/COULOTTE

### CUT DESCRIPTION

The 184D (IMP/NAMP) Beef Loin, Top Sirloin Cap consists of the Biceps Femoris muscle. It is removed from the 184 Beef Loin, Top Sirloin Butt by following the natural seam.



### COOKING USES

- Roast Application
- Grilled Steak Application
- Korean BBQ Application
- Hot Pot Application

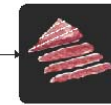


The Top Sirloin Cap can be left whole and trimmed for a i. Roast Application.

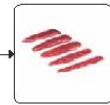


The Top Sirloin Cap also can be trimmed and left whole for a i. Roast Application.

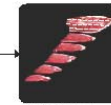
### MERCHANDISING METHOD



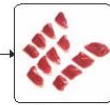
Cut 3/4" steaks across the grain for a Grilled Steak Application.



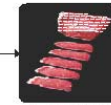
3/4" steaks for a ii. Grilled Steak Application.



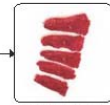
Cut 1/4" thin steaks across the grain for a Korean BBQ Application.



1/4" thin steaks across the grain for a iii. Korean BBQ Application.



Cut 1/16" thin steaks across the grain for a Hot Pot Application.



1/16" thin steaks for a iv. Hot Pot Application.



\*IMPS/NAMP numbers sourced from The Meat Buyers Guide, NAMP © 2010 Cattlemen's Beef Board [www.beefinnovationsgroup.com](http://www.beefinnovationsgroup.com)

Product  
Enhancement  
Research



[RETURN TO BIG WEBSITE](#)

The diagram shows a cow with various beef cuts labeled: Chuck, Rib, Short Loin, Brisket, Shank, Plate, Flank, Shank, Sirloin, Tenderloin, Top Sirloin, Bottom Sirloin, and Round. The Chuck cut is highlighted in yellow. A callout box on the right contains two items:

- Chuck Roll
- Chuck Shoulder Clod

**BEEF**  
Funded by the Beef Checkoff

